

and it may be recalled that Réaumur placed alligators and crocodiles among arthropods. Swammerdam believed that man and the frog pass through the same developmental stages as insects; that is, of an egg, a worm, a nymph (pupa) before reaching maturity. He also observed bees and experimented with them but, contrary to Réaumur, concluded that the female is impregnated by an aura. Since Swammerdam had found that frog ova are fertilized externally his return to an old error is all the more surprising.

CROSS-FERTILIZATION

Up to about the middle of the nineteenth century the attention of embryologists was focused mainly upon reproduction, the genesis of form, the relationships of organs and upon comparative embryology and phylogeny. The accumulation of many facts regarding the structure and form of the embryo was necessary before it was possible to undertake experimentation, but one need only recall that the keeping of bees dates far back in human history in order to realize that many experiments undoubtedly were made in this connection. The same thing probably holds for hybridization, for the "mule" among plants and animals very naturally excited great curiosity and speculation and it is likely that the breed of hybrids we still call mules has been produced from time immemorial. The fact that they were sterile could not fail to arouse curiosity and must have stimulated attempts to produce similar forms in other species. The crossing of the partridge and the domestic fowl, of dogs and foxes, must be things of the distant past, and for race crossing among men slavery offered abundant opportunity. It must have seemed anomalous that they are fertile.

(To Be Continued)

WILLIAM STEWART TAYLOR

1847-1931

A TRIBUTE TO A CALIFORNIA PHYSICIAN

By MARTIN H. FISCHER, M. D.
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"FOR forty-six years a practitioner of medicine in this valley." These are the significant words that are engraved upon the marker of William Stewart Taylor's grave. The casual reader may see in these words only the sign of a long and arduous service; those of better understanding will find in them a monument to all that medical teachers and medical schools have striven for and all that a suffering humanity of the past or the present has ever cried for.

William Stewart Taylor became a piece of his time at eighteen when, at the close of the Civil War, he floated down the Ohio from Pittsburgh to St. Louis. The army was there disposing of its mules and as the driver of a six-mule plains wagon he joined a caravan of such, bound West. The nights, beginning with the first, were broken by the circular ridings of Indians. "Not to die"

was to become a part of that spirit of the West whose marks were silence, long-suffering, endurance, and fortitude.

With some five years of such discipline to his credit he made his way back to the home town of Saltsburg, in Pennsylvania, and after "reading" medicine with the doctor of his village he went to Philadelphia, where, in 1874, he had bestowed upon him the medical degree of Jefferson Medical College. He went almost at once to California and after a season in San Francisco, wishing to work with man where man touches his world most directly, he settled in the village of Livermore in the basin of California's sumptuous Livermore Valley. Her people were ranchers, her wealth was the wealth of fruits and animals, and her intelligence was that which comes from immediate contact with the soil. The wealth that springs from the accident of natural resources never came to the pioneers of the Livermore Valley.

The youthful Taylor came as first physician into this empire. As her population increased others came, but Taylor remained the first.

What kind of mental capital could the most competent of practitioners bring to any community in A. D. 1876? The medical hazards of life were the hazards of epidemic disease and its surgical hazards, those that spring from infection, from pregnancy, and from accident. All medicine came to young Taylor's door; and whatever its nature it had to be met by Taylor, and by him alone. To say, therefore, that he was a man of capacity, that he was skilled in the administration of medicine, skilled as an obstetrician, skilled as a surgeon, is to state the obvious. The practitioner of those days had to be these things or perish.

But the handicaps under which the medical and surgical knowledge of that day had to be applied added difficulties unknown today, for what is now school-boy knowledge was then unborn. The mere existence of microorganisms was still being denied; bacteria as the causes of disease were just being suggested—and flouted; disease as the expression of specific infection was hypothesis and surgery without pus was unimaginable. The turn came a decade after Taylor's graduation and few were the men who, born into the preantiseptic and the preaseptic schools of medical thought, could make the change to the new. Taylor did.

But this first change in his point of view regarding fundamentals in medical theory and medical practice was only the beginning of a series of such that he had to overcome. In surgery mere mechanical deftness had to ally itself with an understanding of the nature of disease, and in obstetrics the red flare of childbed fever had to cease being an act of God to become something more closely related to malpractice. In medicine, dropsy, fever, and peritonitis had to cease being diseases and to appear as the products of more primary disasters; while infection with specific microorganisms had to bring with it the at once simplifying and complicating concepts of specific

causes for specific fevers. In therapeutics the empiric use of what was good for the sick man had to find its surer foundation in a knowledge of what constituted disordered physiology and the usefulness of any scheme of treatment in reordering it. Taylor did these things, exchanging in consequence not only the good of an older decade for the better of a later, but increasing in the process his total armamentarium for the care of the ill.

A fleeting world will first remember Taylor as the steward of the lives and happiness and sorrow of the charges that were committed to his care. He healed the sick; he lengthened their lives; he relieved their sufferings of body and of mind. This discharge of his duties he felt to be his own first right to life. Very few of his patients, even of those most intelligent, did know or could know what inward labor, inward judgment, and inward discipline he brought to bear upon the problems in hand. A professional service is likely to be of increased value because more years of experience lie behind it; but Taylor gave not only this but the gem of quality. Perhaps his colleagues were the best judges in such matters. Taylor ranked so high among his professional brethren that any would have been proud to be called a friend; and yet those that he did call such were very few. Analysis of who they were brings forth names nationally or internationally known in epidemiology, in principles of medicine, in work upon the fringes of pathological theory. These men spoke to him of the philosophic heaven in which he himself lived and out of which he could bring for eighteen hours a day the flowers which he laid upon a sick world's bed.

Taylor knew the history, the men, the minds of his profession, and not from books merely, but first-hand. He had his own bacteriologic laboratory when schools were still without them; he used antitoxin when professors were still lecturing against it; and he discussed the merits of vaccine therapy when most of his colleagues did not know that such a field existed.

In 1907 he told me that the ground squirrels of his valley were again perishing of an epidemic disease; that they had perished similarly three and six years before, and that he thought the disease was bubonic plague. Shortly thereafter he shipped to the laboratory in Oakland the dead squirrel out of which Dr. William B. Wherry isolated for the first time the bacillus of plague and through which California was recognized as an endemic focus of this disease and harbored in these rodents.

The lives of men like Taylor are "writ in water"—they leave no printed pages, they build no houses, their contemporaries perish. Lengthened days are taken for granted, and suffering relieved has no memory. In another decade, perhaps, even our subject may be one with the unknown, but the strand woven of his unselfishness, his quiet labor, and his moral courage may forever be found as a part of that which has given strength and honor to the physician's calling.

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CLINICAL NOTES AND CASE REPORTS

FOREIGN BODIES IN MALE URETHRA

REPORT OF CASE

By E. M. WILDER, M. D.
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FOREIGN bodies in the male urethra are not so infrequent nor is their removal so difficult as to justify reporting most cases that present themselves. However, the somewhat unusual size and character of the object removed from the following patient prompts me to place it of record.

REPORT OF CASE

On October 9, 1931, a male, age thirty-three, entered the urological service of the Sacramento Hospital, stating that a few hours previously he had introduced a common wooden indelible pencil, blunt end first, into his urethra and had lost it in his bladder. An x-ray plate showed the pencil, apparently about six inches long, lying with the blunt end in the bladder and the sharp end in the deep urethra, apparently behind the triangular ligament. Inspection showed the sharp end presenting in the perineum and apparently close under the skin, as if it had penetrated the urethral wall.

As it seemed probable that the sharp lead point of the distal end would be hard to grasp with alligator forceps through an endoscope, with sufficient firmness to remove it and that the manipulation to disengage the point from the supposedly penetrated membranous urethra might unduly damage the external sphincter, I decided to extract it through the perineum. Accordingly we cut down on the presenting point, under local anesthesia, and found that the point was engaged in the membranous urethra behind the anterior layer of the suspensory ligament, fortunately without having penetrated the urethral wall. With a little care the point was teased through between the fibers of the external sphincter and the pencil pulled out by stretching this opening without cutting the muscle. After a routine closing of the urethra over an indwelling catheter, the patient left the hospital on the tenth day.

The pencil, an ordinary Dixon's copying type, measured 6 and 13/16 inches by 5/16 inches.

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OPEN SAFETY PIN IN THE STOMACH OF AN INFANT*

REPORT OF CASE

By H. J. HARA, M. D.
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AN open safety pin in the stomach of an infant is a source of much concern to its parents. The family physician is also disturbed, the thought of the possibility of perforation of the stomach or bowels being uppermost in his mind. The abdominal surgeon considers that children under one year of age are poor risks for gastrotomy. The final decision for the successful management of such a case frequently falls on the peroral endoscopist, who is called in consultation. Every well trained bronchoscopist knows that

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